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Masahiro Ishiyama

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EXAMINER

STRANGE, AARON N

ART UNIT

PAPER NUMBER

2153

DATE MAILED: 07/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/671,245

Applicant(s)

ISHIYAMA, MASAHIRO

Examiner

Aaron Strange

Art Unit

2153

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 25 April 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-42 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15, 17, 18, 20, 21, 23, 24, 26, 28, 30, 32, 34, 36, 38, 40 and 42 is/are rejected.
- 7) ☒ Claim(s) 16, 19, 22, 25, 27, 29, 31, 33, 35, 37, 39 and 41 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments filed 4/25/06 have been fully considered but they are not persuasive.
2. Applicant has significantly amended the claims and argued that several new limitations are not taught by the presently cited references. The Examiner respectfully disagrees, and the newly added limitations have been addressed in the rejection below.
3. With regard to Applicant's assertion that "Logan and Elz are silent regarding receiving plural domain name inquiry responses as a result of a single domain name inquiry request" (Page 23, Lines 14-21 of Remarks), the Examiner respectfully disagrees. Logan teaches receiving a single request for content from a client and creating multiple request to determine the current response time of a plurality of content servers (at least Col 5, Lines 3-18 and 45-59). Elz teaches distributed DNS to ensure reliability of the DNS system. As discussed below, it would have been both advantageous and obvious to query multiple DNS servers in order to select the "best" one for the requesting client.

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Logan et al. (US 6,578,066) in view of Elz et al. ("RFC 2182").

6. In regards to claim 1, Logan discloses a domain name system inquiry apparatus comprising:

current location information receiving means for receiving location information of the apparatus itself on a connected network (by resolving the request, the receiving means determines the location of a client on the network, col 10 lines 52-57);

current location management means for storing location information received by said current location information receiving means (this information is temporarily stored for checking the information versus a table of server locations);

server information receiving means for receiving server information regarding plural redundant servers to which an inquiry can be made (The switch examines the hand-off table for determining a server to hand off to, col 10 lines 58-62);

server management means for storing the server information received by said server information receiving means (a hand off table is stored for all the servers, col 10 lines 58-62 discusses the use of the table);

request receiving means for receiving a inquiry request from a client (a request is received from a client, col 10 lines 52- 57);

request transferring means for creating first and second inquiry requests based on the inquiry request received by said request receiving means and at least one of said location information and said server information, and for transferring said first and second inquiry requests to the first and second servers (each server containing the requested content is queried for its current response time)(Col 5, Lines 3-18; Col 6, Lines 30-41), respectively;

response receiving means for receiving a first response to the first inquiry request from the first redundant server and a second inquiry response to the second inquiry response from the second redundant server (each server responds to request in order to determine current response time) (Col 5, Lines 3-18; Col 6, Lines 30-41); and

request responding means for selecting the second inquiry response based at least on server information corresponding to the first and the second redundant servers (least costly server; Col 5, Lines 57-59)(closest server; Col 9, Line 60 to Col 10, Line 15), and for sending the second response corresponding to the second server to said client (response is returned by the switch)(Col 5, Lines 51-55).

Logan fails to specifically disclose that the redundant servers are DNS servers. However, redundant DNS servers are well known in the art, as evidenced by Elz.

Elz teaches the use of multiple DNS servers to allow clients around the world to reliably reach a DNS server in the event that one is unavailable, as well as reduce the load on the primary DNS server for the zone. Using DNS servers in the system disclosed by Logan would be extremely advantageous since it would allow clients to locate the best DNS server from the group of redundant servers to sent their resolution

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requests. Since name resolution requests must be completed before content may be retrieved, using the fastest, closest, and/or cheapest DNS server for each client could greatly reduce the overall latency and/or cost experienced by that client.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the system disclosed by Logan to select the best DNS server for each client so that the latency/cost of content requests would be reduced and the load on the DNS servers would be balanced among the redundant secondary DNS servers.

7. In regards to claim 2, Logan further discloses:

algorithm receiving means for receiving an algorithm for selecting said response result (a health check is done, which is an algorithmic examination of the network and the servers, col 5 line 60 - col 6 line 41);

algorithm management means for storing the algorithm received by said algorithm receiving means (the algorithm is stored by the checking system, tables I-IV show the details of the algorithms);

algorithm processing means for selecting the second response result in said request responding means by using the algorithm stored in said algorithm management means (the results of the algorithmic expression are searched and the most appropriate response is found and forwarded to the client, col 10 lines 37-65).

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8. Claims 3,5, and 6 are rejected for the reasons cited above with regard to claim 1, since they recite substantially identical subject matter.

9. Claims 4 and 7 are rejected for the reasons cited above with regard to claim 2, since they recite substantially identical subject matter.

10. Claims 8-14 rejected under 35 U.S.C. 103(a) as being unpatentable over Logan et al. (US 6,578,066) in view of Elz et al. ("RFC 2182").

11. In regards to claim 8, Logan discloses a domain name system inquiry apparatus comprising:

server information receiving means for receiving server information regarding plural redundant servers to which an inquiry can be made (The switch examines the hand-off table for determining a server to hand off to, col 10 lines 58-62);

server management means for storing the server information received by said server information receiving means (Col 10, Lines 58-62);

request receiving means for receiving an inquiry request from a client (a request is received from a client, col 10 lines 52- 57);

request transferring means for transferring the inquiry request to first and second servers based on said server information (each server containing the requested content is queried for its current response time)(Col 5, Lines 3-18; Col 6, Lines 30-41);

response receiving means for receiving a first response from the first redundant server and a second inquiry response from the second redundant server (numerous responses can be received and forwarded by the switch, col 10 line 62-65); and

request responding means for selecting the second response based at least on the server information corresponding to the first and second redundant servers (Col 6, Lines 21-35) and for sending the second response result to said client (an ordered list is sent to the client, with the best server being given priority, col 10 lines 58-65).

Logan fails to specifically disclose that the redundant servers are DNS servers that respond to DNS requests. However, redundant DNS servers are well known in the art, as evidenced by Elz.

Elz teaches the use of multiple DNS servers to allow clients around the world to reliably reach a DNS server in the event that one is unavailable, as well as reduce the load on the primary DNS server for the zone. Using DNS servers in the system disclosed by Logan would be extremely advantageous since it would allow clients to locate the best DNS server from the group of redundant servers to sent their resolution requests. Since name resolution requests must be completed before content may be retrieved, using the fastest DNS server for each client could greatly reduce the overall latency experienced by that client.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the system disclosed by Logan to select the fastest DNS server for each client so that the latency of content requests would be reduced and



the load on the DNS servers would be balanced among the redundant secondary DNS servers.

12. In regards to claim 9, Logan discloses a domain name system inquiry apparatus, further comprising:

algorithm receiving means for receiving an algorithm for selecting said second one response result (a health check is done, which is an algorithmic examination of the network and the servers, col 5 line 60 - col 6 line 41);

algorithm management means for storing the algorithm received by said algorithm receiving means (the algorithm is stored by the checking system, tables I-IV show the details of the algorithms);

algorithm processing means for selecting said particular one response result in said request responding means by using the algorithm stored in said algorithm management means (the results of the algorithmic expression are searched and the most appropriate response is found and forwarded to the client, col 10 lines 37-65).

13. Claims 10, 12, and 13 are rejected for the reasons cited above with regard to claim 8, since they recite substantially identical subject matter.

14. Claims 11 and 14 are rejected for the reasons cited above with regard to claim 9, since they recite substantially identical subject matter.

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15. With regard to claim 15, Logan further discloses means for selecting the second inquiry response based on a priority of the second server included in the server information being higher than a priority of the first server included in the server information (closest server has priority) (at least Col 9, Line 60 to Col 10, Line 15).

16. With regard to claim 17, Logan further discloses that a response time of the second domain name inquiry response is greater than a response time of the first domain name inquiry response (a slower second site will still be selected if it is closer/cheaper, etc) (at least Col 5, Lines 55-59; Col 19, Line 54 to Col 10, Line 15).

17. Claims 18,21,24,28,32,36 and 40 are rejected under the same rationale as claim 15, since they recite substantially identical subject matter. Any differences between the claims do not result in patentably distinct claims and all of the limitations are taught by the above cited art.

18. Claims 20,23,26,30,34,38 and 42 are rejected under the same rationale as claim 17, since they recite substantially identical subject matter. Any differences between the claims do not result in patentably distinct claims and all of the limitations are taught by the above cited art.

***Allowable Subject Matter***

19. Claims 16,19,25,27,29,31,33,35,37,39 and 41 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

20. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

21. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aaron Strange whose telephone number is 571-272-3959. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glen Burgess can be reached on 571-272-3949. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AS  
7/9/06



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